ORIGINAL ARTICLE

Trends and development of a national cadastral system in Benin: Toward effective land management

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Abstract

This research was carried out to analyze the implementation of the national cadastral project in Benin which is within the context of informal land ownership that is common in many African countries where land assets are often unregistered and poorly managed. A key solution for this problem is the development of cadastral systems which require political commitment and public actors to be effective. The study used a qualitative approach, and it also used both secondary data which were collected from documentations, and from primary data which were collected from targeted interviews which were conducted to 32 stakeholders, 9 focus groups with beneficiaries and non-participant observation of land data collection procedures. What was the analytical theory that you used to analyze the data? The results of the study revealed that since 2013, legal reforms, sequenced projects and land data collections have been carried out in a dynamic ways which was supported by political and administrative actors. The population generally backed this approach since it was aimed at improving land security. In addition, the research also emphasized the need for the government to address the issues that led to the failure of previous projects such as the lack of public support and suspicions regarding hidden agendas in order to ensure the project's success and sustainability once external funding runs out.

Keywords: Public actions, political will, cadastral system, land management, Benin

Introduction

Land in Africa is poorly managed, and more often than not, the inventory of land assets is not taken, and it is not given the informality of rights. Cadastral systems which are described as mechanisms at the heart of land administration functions, are therefore, increasingly promoted by various international institutions (World Bank, United Nations, European Union, Agence Française de Développement, etc.) to organize land operations (FIG, Publication n° 61; Chekole et al., 2020). The importance of a cadastral system in developing countries was first described in the 1980s (Williamson, 1986, 1997). For

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Osterberg (2002),"A cadastral system is important for sustainable development of land management," and for Williamson (2001),"In developing countries, the introduction or improvement of land administration systems is a key component of land policy for countries." They are being encouraged to upgrade their land-books based on the Torrens system which is introduced in most countries during the colonial periods. Since the end of the 20th century, several African countries (Ethiopia, Rwanda, Kenya, South Africa, Botswana, Ghana, Benin, etc.) have started cadastral projects. These highly technical cadastral projects are being developed in diverse contexts of political governance, but they are confronted with the problems of "ungovernability", which characterizes land managements in the continent. This situation has turned land tenure into a "social problem" due to the actions of various actors, and it is prompting political leaders to respond in terms of public action (Hassenteufeul, 2011).

As it is mentioned in different literature, land problems are the subject of several scientific writings and debates since it supports economic development, urban policies problems (planning, urban development, housing, roads, etc.) and fiscal policies. The answers to these problems are numerous and varied. They do not only depend on time, but they also depend on changes in political doctrines. Indeed, by reading (Pisani, 1977), one realizes that for a long time, it was believed that the land problem was legal, technical and economic, and that a good dose of ingenuity would be enough to solve it. However, due to the complexity of land use and functions, we ultimately came to the conclusion that, in our contemporary society, facing a steady population expansion, land constituted the most crucial political issue (Natacha, 2005).

Public, economic, urban, tax, social and housing policies for populations are determined by the availability and access of land resources. Land is consequently a social fact, and by extension, it is a political reality in the widest meanings of the word. Therefore, only a competent land policy will grant access to this resource to communities, business, state public institutions as well as the middle class and the most disadvantaged groups.

Benin's societal trajectory has experienced sustained dynamism in land policy since the national conference[6] which opened the way to democratic and decentralized governance processes. Since then, Benin has been experimenting with decentralized land management through municipal land affairs departments. In these municipalities, local management tools (Registre Foncier Urbain, Plan Foncier Rural, etc.) were set up in 1989 to serve as a basis for land data. These information systems are known as simplified and computerized cadastres (Simmoneau, 2015). In the majority of cases, they have enabled an increase in tax revenue, an inventory of presumed municipal ownership, proof of private property rights and support for the emergence of the land market (Simmoneau, 2015, Groupehuit, 2017, Guinin Asso, 2022). However, there are several problems which municipal managements faced. Among these are: a questioning of formerly recognized and legitimized transactions, conflicts between municipalities and communities on subdivisions/resettlements, neighborhood conflicts on the topographic limits of plots, land grabbing that threatens families with explosion, the loss of agricultural land, the sale of private State domains and land securitizations on public domains, etc. To provide solutions to these problems which have become structural challenges for the Beninese State, an alliance has been forged between political and technical actors particularly land administrators to set up and manage a cadastral development project under the aegis of a centralized national institution, the Agence Nationale du Domaine et du Foncier (Mekking et al., 2021).

6 The "Conférence nationale des forces vives de la nation" was held from February 19 to 28, 1990. See R. Banegas, 1995, "Action collective et transition politique en Afrique. La conférence nationale du Bénin", Cultures &Conflits, Vol. (17), pp. 1-25.

The land management reforms which have been introduced have led us to perceive the different ways in which decisions and conceptions relating to "land things" have evolved. Regarding land, political conventions have become the raison d'être of technology. Developing a land information system such as the cadastral system can only be conceived and prosperous if it enjoys efficient and viable political supports. Chekole et al., (2020) state that, without positive political will, no cadastral system can function properly. However, even if the political will is acquired and good governance is accepted as a principle (Programme des Nations Unies pour le Développement, 2009; Ministère d'Etat chargé du Plan et du Développement, 2018), the question of the means of real action arises insofar as, from the period of the Structural Adjustment Plans (SAP)[7]. Today, Benin's development policy involves projects which are supported more by foreign aid. However, aid alone is not enough to carry out concrete actions that can bring about development; you also need the will to achieve results. Along with the changes in political thinking over the last few decades and the reforms that have been carried out in the land sector, we can say that political will is a crucial issue for Benin's land tenure system.

From this introduction, we understand that several studies have highlighted the importance of cadastral systems for land management while others have noted political will as a crucial issue for their implementation. However, they mainly focus on the technical aspects of the matter, and they do not question what concrete actions need to be taken by political and public actors for better realization of cadastral projects. The question, then, is how public action determines the implementation of the national cadastral system project in Benin? This means describing the government action which surrounds the national cadastral project, identifying the project's legal and technical innovations and scrutinizing the public's view of the project.

After clarifying the research context, the following section presents the methodological and theoretical framework. This is followed by the results across the various strands (political, technical and participatory) of this project. Finally, a discussion explores the effectiveness of the national cadastre in addressing land management issues in Benin.

Methodological approach to the research

The Study Area physical setting

This study was conducted in the Republic of Benin. Benin is a francophoning West African country with a total surface area of 114763 km². The country is located between 6° 30" and 12° 30" N latitudes and 1° and 4° 30" E longitudes in the tropical zone. According to the last general population and housing census which was done in 2013 (RGPH-4), its population was 10 million. This population is spread across 12 departments and 77 municipalities. To implement the national cadastral project, the Agence Nationale du Domaine et du Foncier has chosen 12 departments and municipality headquarters for the first deployments. For the purposes of this research, the communes of Cotonou and Abomey-Calavi in the southern region and the commune of Bohicon in the central region of the country were selected as shown in Figure **(1)** below. These were selected as site areas for collecting data to the project.

7 According to the African Development Bank, the SAP covered a period from 1989 to 1995.

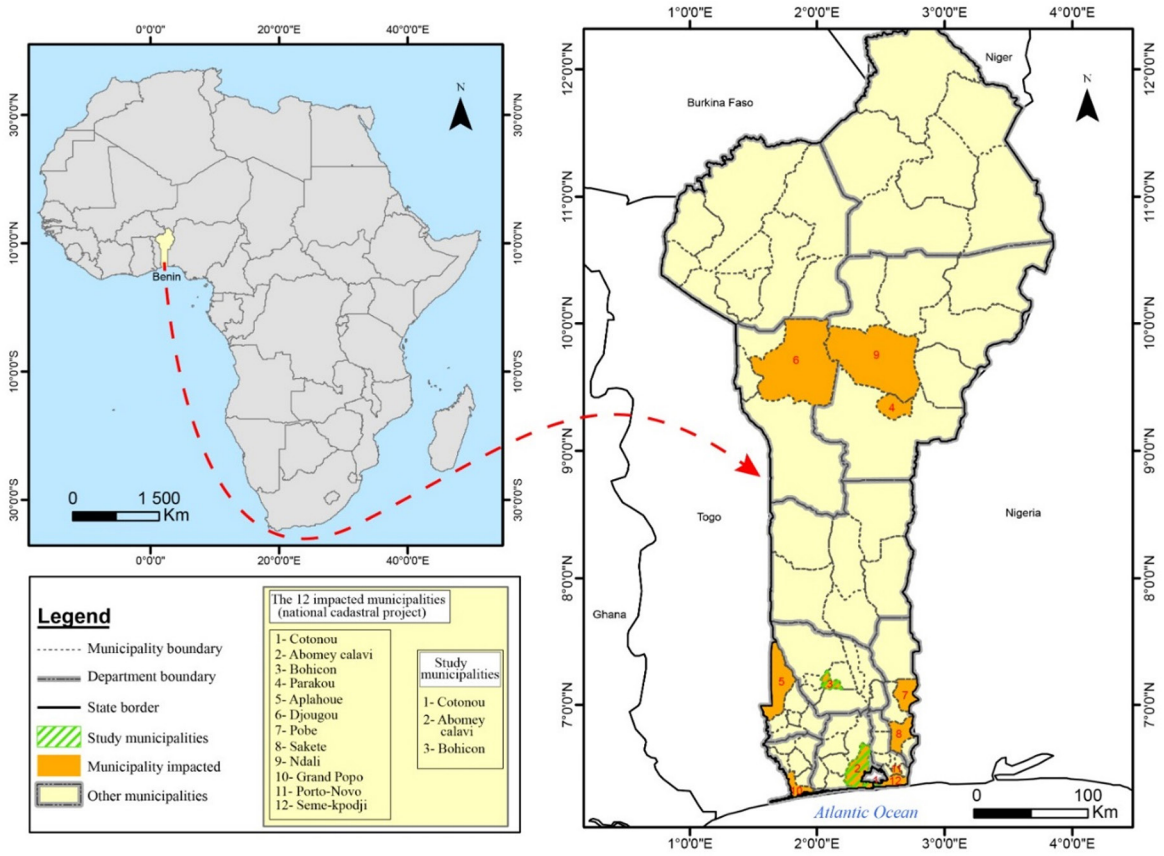

Figure 1: Geographical location of the study area

Source: Benin - Subnational Administrative Boundaries, 21 August 2019, updated by the authors, 2024

Research methodology

This study focused on a development project (the National Cadastre Project) which is currently being rolled out in Benin. Here, we have attempted to highlight the project's implementation process through different decision-making and sociotechnical stages based on the premise that the analysis of development actions cannot be disassociated from local administrative and popular dynamics (Olivier de Sardan, 1995).

In order to achieve this objective, the study used qualitative research method within the context of socio-anthropological studies. In addition to a critical review of the literature on the concepts of cadastral systems, development projects, public action, land management and land information systems, the study drew upon books, scientific articles, theses and dissertations and the reading of various legal texts and political opinions which were printed in newspapers. Furthermore, the "qualitative approach to the land question" described by Le Meur (2002) was used to collect data in the field. This approach entailed

the collection and analysis of the project's decrees, texts, memos and procedural manuals with the objective of attaining a more comprehensive understanding of the operational plan and the actions which were undertaken as part of the project. Subsequently, with the assistance of a focal point, the project's diverse institutions, stakeholders and target audiences were identified and categorized. After this categorization, an interview guide was prepared and administered to some initially targeted stakeholders who were chosen based on their expertise and involvement in the early phases of the project. These semi-structured interviews were conducted to 8 agents who were from the Land Registry and Land Information Operations Directorate (ANDF), 6 representatives who were from the Village Land Management Section (SVGF), 6 traditional chiefs, 10 geo-land experts, 2 agents who were from the municipalities of Abomey-Calavi and Bohicon and 2 agents who were from the National Geographic Institute (IGN). This was followed by focus groups who were organized in 9 groups of 6 to 11 people who are beneficiary populations in the villages and neighborhoods who were chosen by the administration in the early phases of the project. Additionally, non-participant observation allowed for the observation of data collection, dissemination and digitization procedures both in the offices and in the field.

For the purposes of finding the results, we opted for a thematic analysis without systematically seeking saturation given the reasoned choice of respondents and the heterogeneity of the information received (Sondou et al., 2023). Thus, themes such as: (i) political engagement, (ii) legislative texts, (iii) system design procedures and (iv) public supports were identified based on coding after manual transcription. Similarly, for confidentiality reasons, the names or roles of the interviewees were not mentioned in the text. Instead, we use the terms "agent," "manager," "beneficiary" and "participant," depending on the context of the meeting and the responsibility exercised.

Theoretical framework

The explanation of the notion of public action which would be "the fruit of a desire to put in place the sociopolitical conditions for dealing with problems" (Dubois, 2014; Levêque, 2008) in case these problems affect the public sphere, leads us to specify this research in "the theory of change in public action" by Muller (2005). According to such an approach, there is a change in public policy when we are faced with the following three changes in: (i) objectives, (ii) instruments and (iii) institutional frameworks (Muller, 2005). Contextually, the objectives pursued by land management in Benin boil down to reconciling land tenure systems (customary and modern) with particular emphasis on the land registration systems promoting land rights, registering at the municipal level, increasing tax revenue and developing communal territories through land knowledge. With the aim of achieving these objectives, the following instruments have been put in place: the Registre Foncier Urbain (RFU), the Plan Foncier Rural (PFR) and the License to live. All these instruments are managed by various institutions (town halls, ministries of finance and urban planning and technical partners) which do not necessarily have a mechanical link between them. Faced with results below expectations and alarmist reports on the state of land in Benin (République du Bénin/CES, 2005), changes will be introduced. They affect objectives, instruments and institutions alike. The current objectives which are targeted by the rulers are to make land a lever for economic development, to pacify land relations and to settle the countless disputes which affect community life and weaken the country's attractions in terms of business generation (Ministère de l'Urbanisme, de l'Habitat, de la Réforme Foncière et Domaniale, 2011). In this wake, at the level of the instruments, the cursor is putting on the development of a national cadastral system which was hosted by a new institution with dismemberments in the municipalities. The ANDF and its deconcentrated branches, the Bureaux Communaux du Domaine et du Foncier (BCDF) have become the

country's main land institutions replacing decentralized services.

In view of these changes, this paper used this theory to show how cadastral instruments can be used to explain the political desires of those in authority in the field of land tenure.

Results

Land management in Benin before the 2013 reforms

Since the colonial period, land management has been oriented toward positive law. Indeed, with the decree of August 05, 1900 which introduced the technique of land registration, land went from being traditionally held to being a modern system. The decree of May 02, 1906 introduced a written system for recording agreements between indigenous peoples in the colonies of West Africa, and the promulgation of Law 65-25 of August 25, 1928 which aimed at the overall operation of the "landbook", the key instrument of land conservation, led the country to move toward the registration of land holdings by the population. After independence in 1960, legislation continued to be passed to regulate land use rights, but Law no. 97-029 of January 15, 1999 on the organization of municipalities in the Republic of Benin, and Law no. 2007-03 of October 16, 2007 on the land tenure system which set out the terms and conditions for the appropriation and management of land by instituting tools for recording simplified cadastral data on land in municipalities.However, as land tenure problems, particularly land conflicts, continue to escalate in the country despite the presence of legal and technical instruments, successive governments have decided to restructure land management.

Institutionalization of the Code Foncier et Domanial and cadastral policy

To restructure land management, the Boni Yayi[8] regime promulgated Law no. 2013-01 of August 14, 2013 on the Code Foncier et Domanial (CFD) in the Republic of Benin. This law abrogated all other legal texts, and it becomes the key to the continuum of land jurisdiction to which all other land-related decisions must be grafted. From 2013 to the present, the reforms followed one another, and no less than 30 legal texts (laws, decrees, orders) were issued in response to this Code including 18. For instance, in each year from 2016-2022[9], almost 3 texts were issued per year. This clear legal impetus is the result of the political will to make land a powerful lever for the national economy with the operationalization of the Agence Nationale du Domaine et Foncier (ANDF) and the subsequent securitization of land.

For the ANDF's operation, article 416 of the CFD specifies that "A specific type of public technical and scientific establishment with legal personality and financial autonomy is created." The desire for this financial autonomy led political leaders to change the supervision of the agency which in 2013 was under the jurisdiction of the Ministry of Land and Property to replace it (with the 2017-15 amendment of August 10, 2017) under the Ministry of Economy and Finance with the goal of making it a veritable tool for the country's economic policy (Ekpodessi & Nakamura, 2018). However, according to Lavigne Delville (2020), Decree no. 2015-405 of July 20, 2015 truly established its prerogatives and enabled it to start operations including the creation of the national cadastral system.

8 Boni Yayi was elected President of Benin in 2006 and served two successive terms before leaving government in 2016.

9 Patrice Talon's first elected term as President of Benin

This tool was created in Article 452 of the CFD and defined as, "A unitary computerized system of technical, fiscal and legal archives of all land on the national territory." (Art. 454, CFD) is beginning to take shape with Decree no. 2016-726 of November 25, 2016 focusing on the creation, organization, powers and operation of the technical committee for supervision of the national cadastre. A decree is issued on the "proposal of the President of the Republic, Head of State, Head of Government". This precision is not insignificant in a country where the President of the Republic is overly powerful which enables him to send messages to other actors who are with divergent interests in the project. Moreover, Article 5 of the Act places the Technical Supervisory Committee under the direct authority of the President.

The development of the cadastral system is an issue which is given attention in the highest political level as seen from the decisions and actions taken to develop it. The system has been the target of a series of sequenced projects.

A cadastre developed through sequenced projects

At an operational level, the development of the cadastral system resulted in the launch of two projects: the "Modernité et Sécurité Foncières" (MSF) project which stayed from 2017 to 2019 and the "Projet de Modernisation de l'Administration Foncière (PMAF)" that extended from 2019 on.

The MSF project is a digitization project of old land data. This involves collecting data from all producing institutions and centralizing them on the ANDF server. In the municipalities, subdivision plans, urban plans, rural land plans and the RFU presumed ownership database were searched and retrieved; at the Institut de Géographie National (IGN), geodesic and cartographic data and satellite images of the country were retrieved; at the Direction Générale du Développement Urbain (DGDU), urban development plans and old land titles were retrieved, and data on all land transactions were requested from the offices of surveyors and notaries. This work has enabled us to classify the nation into three areas: (i) areas that are covered i.e., where land data are available; (ii) areas that are partially covered where data are available but need to be collected and updated, and (iii) areas that are not covered where land information needs to be collected in full. In terms of the results, nearly 40,000 old land titles (Titres Fonciers - TF) were found, 18,000 new titles were integrated into the e-Terre land registration database, 95% of the localities were positioned or repositioned in the event of scale conformity errors, 1,961,046 parcels were identified as presumed properties and integrated into the cadastral database, 7% of the parcel surface area i.e., 8,153 km² out of 79,299 km² of surface area excluding forest and hydrographic cover was covered, and a website was created to dematerialize the land information search procedure. During the process, it became apparent that all the institutions which the issue concerned were cooperated to varying degrees in making their data available to the ANDF. However, there were also difficulties with cooperation in several cases, for example, between the ANDF and other municipalities. The municipalities claimed that ANDF is robbing them of their prerogatives as a result of which they avoid providing all the data. They deliberately fail to meet deadlines in order to persuade ANDF to turn its back away from them. This is borne out by the remarks made to us by one of the agency's agents:

> We only receive appointments after appointment from certain town halls, or they send us to the surveyors who carried out the subdivision; the surveyors also claim to have submitted all the files to the town hall after the work, whereas the association is well involved in the process and had to train the elected representatives and explain the merits of this operation before it

began.

In other institutions, it is thought that the ANDF will completely eject them from land management and even cost them their positions. This is the case at IGN where they try to retain their role in different ways: they have negotiated the installation and maintenance of geodetic systems, the supply of satellite images and updated maps which were needed by the cadastral system. These were the data that the agency could use directly to reduce costs and save time. This project has enabled a large amount of digitization and dematerialization works to be carried out which provided a fundamental basis for the cadastral system. To continue this process, the government and its technical and financial partners launched the PMAF.

The PMAF is a support program of the Dutch Embassy and the Dutch cadastral agency (Kadaster) for the continuation of the process of setting up the cadastral system. The objective of this project was to strengthen the land administration, verify existing data in the field, update the data and launch new data collection and processing on a larger scale. During its implementation, administrators opted for new approaches particularly those who were involving systematically in collecting land data from households. With this in view, the ANDF has set up procedures for collecting and processing land data in several phases with the participation of various stakeholders, as shown in **Table (1):**

Table 1: Collection and land data processing procedures

Phase	**Activities carried out**	**Service providers**
Collecting information	Creating INFOCAD plate form	Computer Company
	collecting of land and social data	surveyor and socio-land Expert Consortium
Land Publicity	Showing land registry plans	NAEL. SVGF, surveyor et social- and Expert Consortium
Correction and integration in land registry	Processing claims, oppositions and data validation	NAEL, surveyor et socio-land Expert Consortium

Source: summary of procedures, Authors, 2023

This table shows the procedures which were followed by the land administration in collecting land data for the PMAF project. It reveals an administrative innovation that consists of surrounding itself with private service providers in the management of public projects. The public private partnership in the land sector has proven useful and necessary, according to those in charge. In this, a manager confides to us that

> *For him, having it done is the best thing, contracting with private service providers is a quick solution; for example, in the event of an emergency of data, even on weekends, the service provider private can go to the field and send you the information whereas at the level of the public services, the civil servants will send you back on working days with questions of order of mission and all.*

From all opinions, this solution is seen as positive because of the bureaucratic complexity

that generally surrounds decision making whereas the ANDF is looking to proceed quickly in setting up the system. These collection phases in the field are combined with the work of the operators of the interactive cadastral data production platform in the office.

Interactive and dynamic platforms for the production of land data

The cadastral system of Benin is based on the ISO standard 19152 Geographic Information-Land Administration Domain Model (LADM). This generic base was promoted in 2012 by the United Nations and the World Bank to enable all countries to have a basis for their cadastral system (Iso/TC211, 2012a; Lemmen et al., 2015; Unger et al., 2023). According to Mekking et al. (2021), the LADM provides formal language for describing property rights through 4 packages: (i) individuals and organizations, (ii) property rights, (iii) parcels and the legal space of buildings and networks and (iv) topographical surveys and representations. They have allowed Benin to identify the items on which its Land Information System is based. The models are activated using the QGIS software package, and they are connected to the e-Terre platform (Figure 2) for all data which are related to land rights confirmations and the production of land titles (Titres Fonciers - TF).

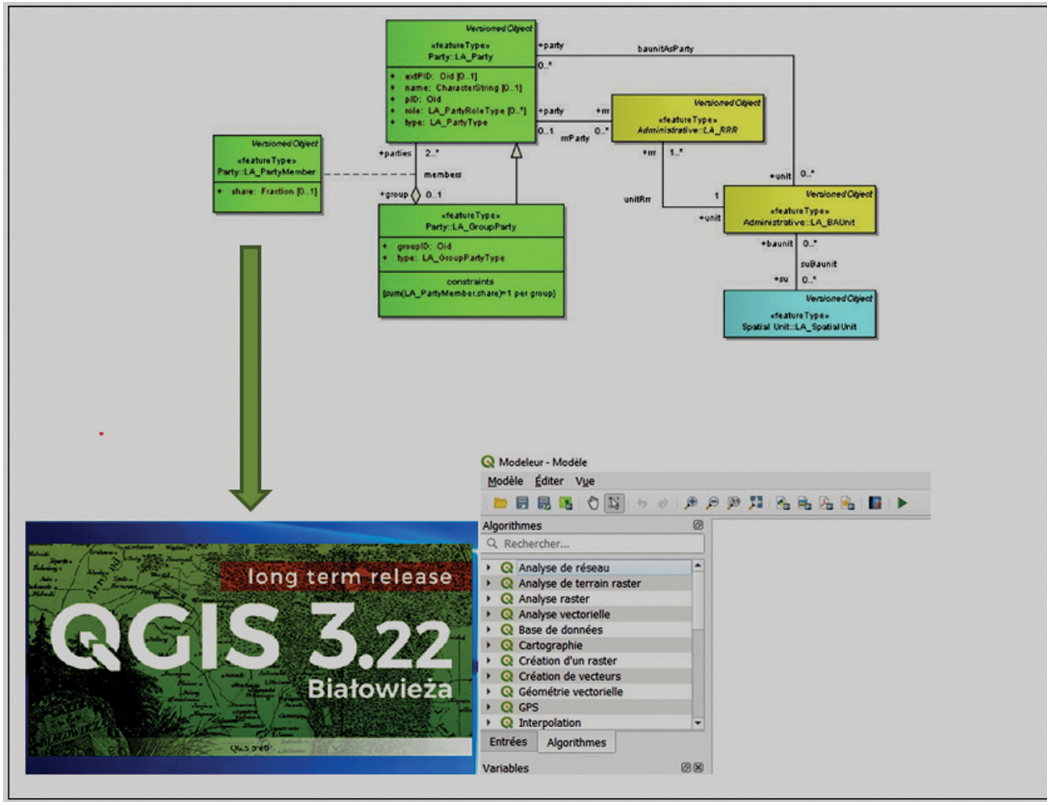

Figure 2: LADM model and data processing software

Source: LADM model taken from Lemmen et al. 2015 and updated by the authors, 2023

The adoption of QGIS by the project is linked to the fact that it is open source which means it is free of charge and does not require annual license renewal to use continuously, as the following statement which was given by an agent attest: “The QGIS software is used since it is open source. It is free software which is available and which is easy to use, and it gives technicians a hand in developing the operation through an interoperable modular”. This interoperable modular system can be used to carry out a multitude of operations in the system based on an algorithm that groups all the branches of land document creation projects together (Figure 3).

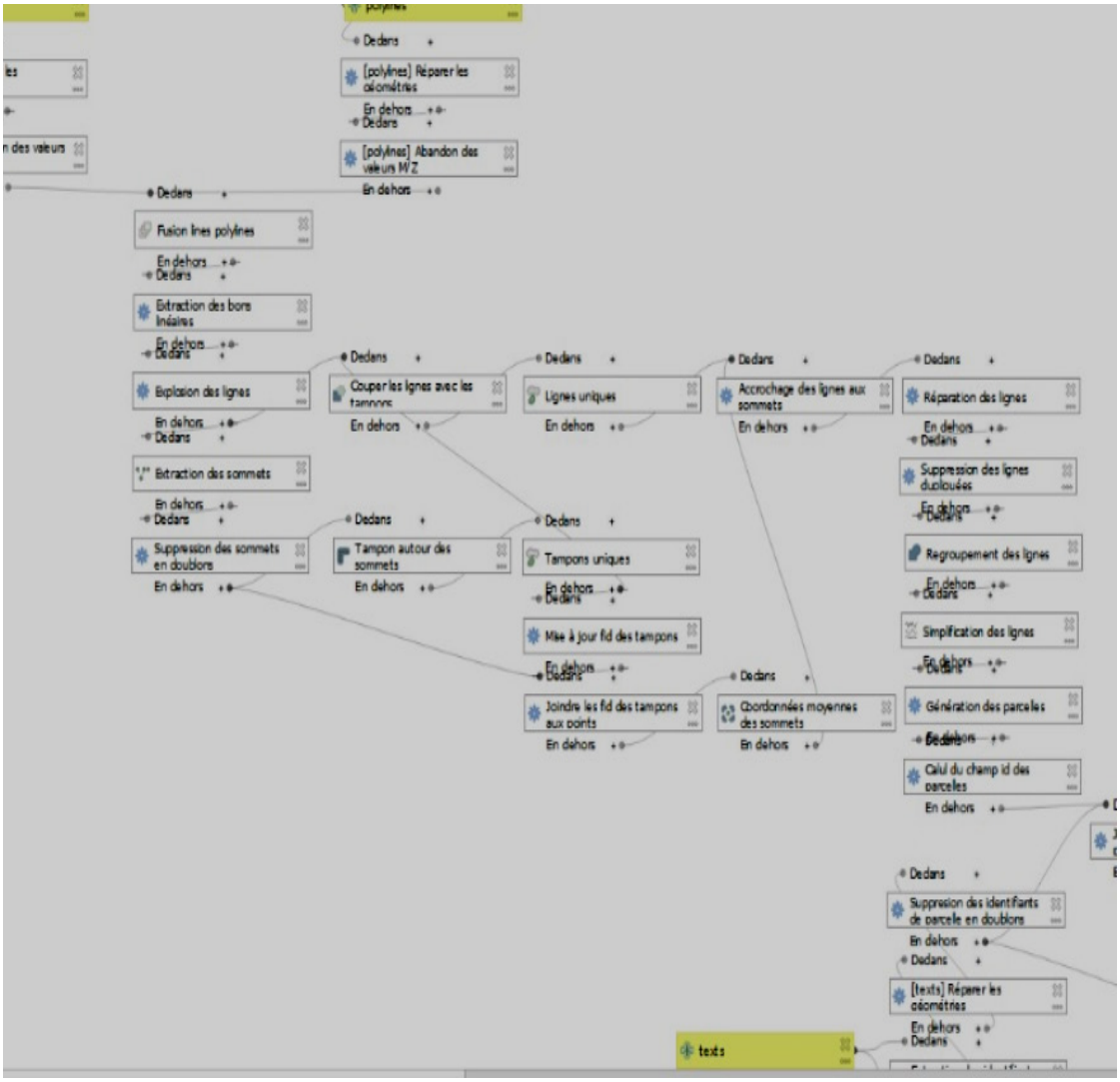

Figure 3: Diagram of the interactive and interoperable modules on QGIS

Source: Modular tool in QGIS, ANDF; Authors, 2023

As shown in Figure 3 above, this modular system enables data to be stored on multiple hardware devices to be processed successively by all agents who have access to the desktop, and to be processed and stored on the central database server and to ensure that the software operates flexibly to deliver the land titles that are the main reason for deploying the cadastral system.

Creating land titles: Process and technological interaction

The process of creating land titles involves interactions between different technical operators as well as between different systems. This process enabled us to understand that the production of land data operates in networks. Specifically, in the cadastral system, the creation of titles involves two procedures. These are the demarcation phase and the data integration phase.

Boundary demarcation: preliminary and verification of parcel limits

Contradictory demarcation is the legal term which is used to describe an operation and to collect parcel boundaries. In the case of Benin's cadastral project, this demarcation was carried out by private geo-topographers who are equipped with a dual-frequency global positioning system (GPS) in the physical presence of local residents and anyone else who have an interest, land claims or proven knowledge of land tenure in the area. This approach is used to delimit the parcels that each landowner claims. The concrete markers were placed underground, and their coordinates were collected (Figure 4). The coordinates are subsequently returned to the cadastral database for checking. This is a crucial step for administrators as it enables them, according to one agent, "To avoid attributing a land title to an ill-defined area, or duplicating land titles in the same area which were frequent errors in the previous system".

a b

(a) The geo-topographic agents collect the terminals of the plots with a dual-frequency global positioning system; (**b**) the virtual agents locate the space on the computers.

Figure 4: Boundary marking and control processes

Source: ANDF, land information system; authors, 2023

This plate virtually shows (b) the coordinates collected by the surveyors (a). The surveyors use their instruments to collect the information which they then process in the AutoCAD software, and they send to the ANDF via the File Zilla platform for setting on the Land Information System. The data are generally approved with a tolerance of no more than 50 cm. Despite the rigorous of this operation, the anti-dating of several spatial elements and of the satellite image recovered does not always ensure data conformity, and we sometimes end up with Land Titles that are completely out of step with reality on the ground. However, many believe that the control procedure has proven highly effective in recognizing parcel boundaries.

Integration of Land Titles and updating of cadastral spaces

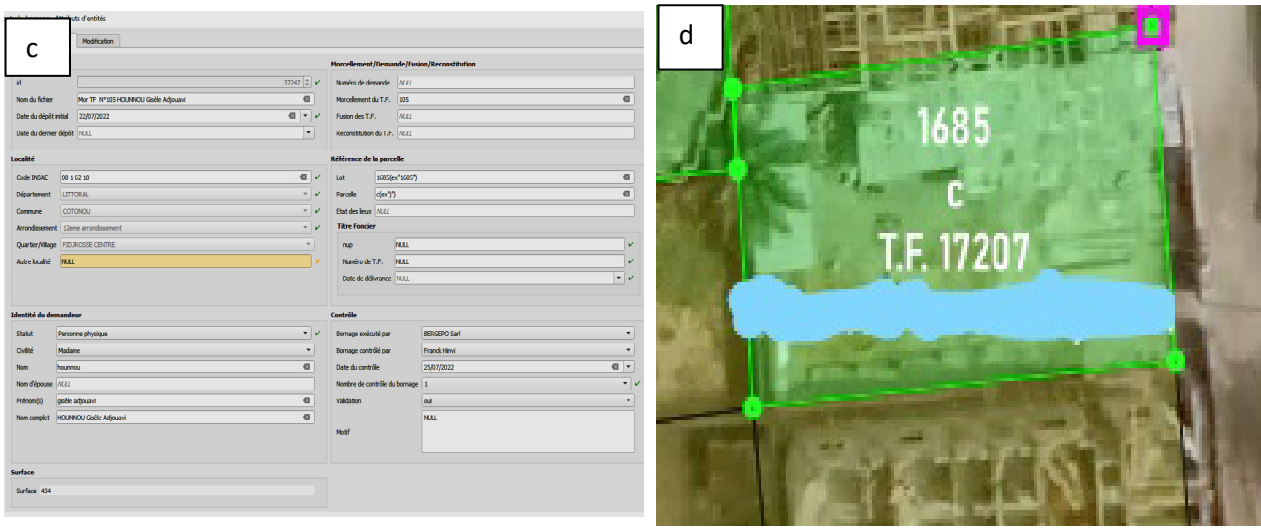

Figure 5: Integration process and digital visibility of the Land title

(c) Format of the integration database on the E-terre platform. (d) Land titles and plots updated by QGIS.

Source: ANDF, land information system; authors, 2023

This process consists of integrating the land titles (Titres Fonciers - TF) which are produced into the cadastral database for digital archiving and online visibility. This integration enables all identities which are related to the property to be entered particularly those of the parcel itself and its neighbors as well as all the social information which is required for recognition of ownership rights. This integration updates the property register. If the integration is effective, the status of the parcel changes from “presumed ownership” to

"titled ownership" (Figure 5).

Updating of this database keeps the data up to date. For example, in the event of a change of owner, a mutation or a parcelling operation can done easily. The public can access this database through the Bureaux Communaux du Domaine Foncier (BCDF) directly via the ANDF, or through consultation online. However, access to the data is very limited. Not everyone has access to information such as the name of the titled landowner. According to an official, "This is to maintain confidentiality at our level, and it is only on request from a state structure or a competent person such as a law court or a surveyor that we will provide the names." This situation constitutes a social limit to the operation of the cadastral system. However, a project that concerns a given population deserves adherence, and the degree of adherence can explain the "success" or "failure" of a project.

Public support and interest in the national land cadastral project

To the main question, "How important is the land registry to you?" A variety of answers were given, but generally speaking, many had a fairly limited understanding a part from the fact that the government is seeking to secure plots of land free of charge. People who have already experienced insecurity are most interested in such a process. For example, a resident of Abomey-Calavi explained, "The problems that people who are living in the Wome district have with plots of land are truly enormous. So, if people's names are registered by the State, they can sell their land more easily," or when one of the participants in Cotonou told us:

> In 2014, when the surveyor wanted to perform the inventory of fixtures in the neighborhood, there was a woman who brought her plaque on my plot, but God knows how to do things. After 3 days, I arrived, and I found that my plaque was removed; a new plaque of 8 numbers was placed or for me had 6 numbers. There's a number underneath, so I called and the man referred me to the person who sold the plot to me; I wanted to force the issue and build on the land, but the elderly man intimidated me into asking anywhere he could. Then, I saw my plaque hidden by the weeds, but the elderly man and his woman swore they hadn't seen the plaque, so they started dragging me off. In front of the surveyor, they backdated their plot to 12 years whereas for me, it was 13 years. That is what helped me prove that the land belonged to me, and it was in 2017 that I contacted the planner who asked the surveyor to regularize the situation in my name. From 2017 to the present day, they have not returned which is why everything the government is doing to secure our plot is a good thing.

These expected expressions showed that the population is behind the process. However, there are concerns raised by some particularly regarding the property tax charges that may follow free registration. For instance, as one participant put it, "The government does not do anything for nothing, and we know all about that".

Discussion

Political will as the keystone of the national cadastre project

This study reveals that the land issues which were facing Benin have prompted those in government to continually reconsider land policy, and to carry out land reforms. These reforms are public actions that range from political, legal and institutional aspects to technical aspects (Polat et al., 2017; Van Oosterom et al., 2022). A major case in point is the introduction of the Code Foncier et Domanial in 2013. Since then, there has been a succession of decisions, orders and decrees which are issued based on this code. This is the case for the national cadastre project. As Simmoneau (2022) noted, this project, like all development projects, follows a timeline punctuated by the rhythm of various projects. However, it benefits from a particular condition: the strong involvement of the upper political leaders. This involvement shows the political will of those who are in power in this project. This political will, as defined by Rocard (2003), is the only one which is capable of bringing about change. This author even believes that public action only asserts itself when it is driven by a strong, enlightened and legitimate political will. In the specific case of land administration, Chekole et al. (2020) reveal in their evaluation of Ethiopia's urban cadastre that "A government can develop a global vision to stimulate the country's economy, but without political will and commitment the authorities will never be able to keep their promise." However, only political will is no guarantee that a development project will succeed (Simoulin, 2010; Lavigne Delville, 2015), but it does activate two important processes: the decision-making process and the implementation process which will ensure that the instrument has a "career" (Simmoneau, (2022).

Cadastre and land management implementation policy

Since the advent of democracy and decentralization, land management policy in Benin has been fully decentralized. As a result, municipalities were responsible for the administrative management of all land assets which are included under their jurisdiction (Lavigne Delville, 1999; Lavigne Delville et al., 2008). In the opinion of the public authorities, however, this form of management did not produce satisfactory results, and it was the source of many conflicts. In addition, the country's dual land tenure system means that land belonging to local communities is often managed without a legal framework and without formalization. These reasons prompted the central government to create a national institution to consolidate all land operations and to launch the national cadastre project to centralize all land data. This centrality of the data is called upon by several experts. Deininger et al. (2012) believes that due to institutional fragmentation, responsibility for land is often poorly coordinated by institutions which have significant gaps between legal provisions and actual implementation. For others, there can be no efficiently functioning land market without centralized data (Chekole et al., 2021) or compliance with internationally recognized cadastral standards. This is what led the country to adopt the LADM model in its cadastral process to move toward a more economically profitable land tenure system, but its adoption lacks a legal framework without which it would be difficult for the system's package, class and attribute design data to truly bring together all types of information (Zhuo et al.,2015) especially as the government's intention is to provide formal rights, i.e., land titles, instead of recognizing customary land ownership rights.

Adhesion as a condition for effective land management

The objective of the securitization maneuvers through the development of the national cadastral system is multifaceted, but it is above all economic as announced in the country's Programme d'Actions Gouvernemental (PAG- 2016-2021- Bénin Révélé, 2016). One could even say that this is a financial investment in which the government expects a return in the medium and long term. However, public policy objectives that are not publicly disclosed can be felt by the population. This social perception can thwart the project's objectives. In this sense, Hull & Whittal (2017) believe that land reforms often fail to achieve their objectives in Africa. They face several pitfalls including public support. Dumas (1983) reports:

> The transformation of a society and the development of its economy depends less on the elaboration of technically correct plans and projects than on the capacity of social groups and the popular masses to stimulate and animate a development that they themselves have defined.

The failure of previous management instruments notably the Registre Foncier Urbain (RFU) and the Plan Foncier Rural (PFR), is partly due to the low level of popular support and lack of confidence in these policies. This observation echoes that made in a report on the operation of the RFU where experts noted that, "The lack of communication around the operation of the RFU fosters a poor understanding of the benefits of local tax collection by the population" (Groupehuit, 2017). In the case of this project, Mekking et al. (2021) argues that the national cadastral system will only produce the desired effects if users understand its importance, and if they have confidence in its proper functioning. It is, then, wise for those who are in power to elucidate the reasons for the failures of development projects if they are to achieve the ultimate goal of effective land management in the country.

Conclusion

The National Cadastre Project in Benin is a highly politically driven project. A number of decisions, decrees and orders have been issued since 2013, the year of promulgation of the Code Foncier et Domanial (Land and Property Code), to give concrete reform to the implementation of the cadastral system. These politico-legal aspects have enabled this tool to be put on track through two sequenced projects: the "Modernités et Sécurité Foncière" (MSF) project and the "Projet de Modernisation de l'Administration Foncière" (PMAF). These two projects have enabled the ANDF to establish its land prerogatives, develop the Land Information System based on the LADM international standard, produce land titles for private individuals and launch a large-scale collection of land data from the population covering all forms and modes of ownership. This approach to land management has truly changed the country's land landscape with a diminishing role for decentralized actors who are rightly or wrongly accused of being at the root of land-related problems. Although the population seems to appreciate the State's takeover of the land sector, it nonetheless, remains suspicious of the unavoidable objectives. It is, therefore, incumbent on the state to explain the full scope of the project and in particular the plan for making such a tool sustainable after the project phases if it wants to win the true support of the popular masses.

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